

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018-AB31

Endangered and Threatened Wildlife and Plants; *Cassia Mirabilis* Determined To Be Endangered

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The Service determines *Cassia mirabilis* (no common name) to be an endangered species pursuant to the Endangered Species Act (Act) of 1973, as amended. *Cassia mirabilis* is a plant that is endemic to the silica sands of northern Puerto Rico and is now limited to three sites in this area. The species is affected by sand extraction, the expansion of residential areas, and industrial development. This final rule will implement the Federal protection and recovery provisions afforded by the Act.

EFFECTIVE DATE: May 7, 1990.

ADDRESSES: The complete file for this rule is available for inspection, by appointment, during normal business hours at the Caribbean Field Office, U.S. Fish and Wildlife Service, P.O. Box 491, Boqueron, Puerto Rico 00622, and at the Service's Southeast Regional Office, Suite 1282, 75 Spring Street, SW., Atlanta, Georgia 30303.

FOR FURTHER INFORMATION CONTACT: Ms. Susan Silander at the Caribbean Field Office address (809/851-7297) or Mr. David P. Flemming at the Atlanta Regional Office address (404/331-3583 or FTS 242-3583).

SUPPLEMENTARY INFORMATION:

Background

Cassia mirabilis was first collected by Dr. Agustin Stahl in the mid-nineteenth century. In 1899, Mr. Edward Heller collected the species in Vega Baja, an area of silica sands. Data obtained from herbarium collections indicate that this species was at one time common throughout the silica sands of the north coast of Puerto Rico (Vivaldi and Woodbury 1981). However, urban, industrial, and agricultural expansion has resulted in the restriction of the species to two areas in Dorado and scattered populations along the southern shore of the Tortuguero Lagoon.

Although *Cassia mirabilis* has been placed by various authors in *Cassia* as a species and in *Chamaecrista* both as a species and a variety (*Chamaecrista glandulosa* var. *mirabilis*), Liogier and

Martorell (1982), in their flora of Puerto Rico and adjacent islands, retain the taxon as a species in the genus *Cassia*.

Cassia mirabilis is a prostrate, ascending or erect shrub which may reach more than 30 inches (1 meter) in height. The leaves are alternate, evenly one-pinnate, $\frac{1}{8}$ to $\frac{1}{4}$ inches (3 to 5 millimeters) long, with some scattered-whitish hairs. The petioles have one to two stipitate glands. Flowers are yellow, solitary, $\frac{3}{4}$ inches (about 2 centimeters) in diameter, with one petal much larger than the others. Mature fruits (legumes) are glabrous, linear, 1 to 1 $\frac{1}{2}$ inches (2.5 to 4 centimeters) long, $\frac{1}{4}$ inch (5 millimeters) wide, flat, elastically dehiscent, and 12 to 15 seeded. The species is endemic to the silica sands of the northern coast of Puerto Rico. These sands are fine, white, highly permeable and strongly acid. They are underlain by an impermeable hardpan located approximately 12 to 16 inches (30 to 40 centimeters) below the surface. Many species are found in Puerto Rico only on these white siliceous sands. Although a dry evergreen or littoral forest is found in the area, *Cassia mirabilis* is restricted to the open areas.

Cassia mirabilis was recommended for Federal listing in 1978 by the Smithsonian Institution (Ayensu and DeFilipps 1978). The species was included among the plants being considered as endangered or threatened species by the Service, as published in the Federal Register (45 FR 82480) dated December 15, 1980; the November 28, 1983, update (48 FR 53680) of the 1980 notice; and the September 27, 1985, revised notice (50 FR 39526). The species was designated category 1 (species for which the Service has substantial information supporting the appropriateness of proposing to list them as endangered or threatened) in each of the three notices.

In a notice published in the Federal Register on February 15, 1983 (48 FR 6752), the Service reported the earlier acceptance of the new taxa in the Smithsonian's 1978 book as under petition within the context of section 4(b)(3)(A) of the Act, as amended in 1982. The Service subsequently made annual findings in each October of 1983 through 1988 that listing *Cassia mirabilis* was warranted but precluded by other pending listing actions of a higher priority, and that additional data on vulnerability and threats were still being gathered. The Service proposed listing *Cassia mirabilis* on April 14, 1989 (54 FR 14976). That action represented the final finding required for the petition process.

Summary of Comments and Recommendations

In the April 14, 1989, proposed rule and associated notifications, all interested parties were requested to submit factual reports of information that might contribute to the development of a final rule. Appropriate agencies of the Commonwealth of Puerto Rico, Federal agencies, scientific organizations, and other interested parties were contacted and requested to comment. A newspaper notice inviting general public comment was published in the "San Juan Star" on April 29, 1989. Two letters of comment were received and are discussed below. A public hearing was neither requested nor held.

Two comments were received from U.S. Army Corps of Engineers (Corps). Neither had additional information on the status of the plant. The Jacksonville office of the Corps stated that a now inactive beach erosion project was previously identified as possibly impacting the species. If the project were to be reactivated its impact on this species should be evaluated. The species was not identified as being present in studies carried out for the Rio de La Plata Flood Protection Project.

The San Juan Corps office identified a project that had been submitted by the Hyatt Dorado Beach Hotel for the construction of a village complex within the range of the species.

Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that *Cassia mirabilis* should be classified as an endangered species. Procedures found at section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations (50 CFR part 424) promulgated to implement the listing provisions of the Act were followed. A species may be determined to be endangered or threatened due to one or more of the five factors described in section 4(a)(1). These factors and their application to *Cassia mirabilis* (Pollard) Urban are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* Destruction and modification of habitat have been, and continue to be, significant factors reducing the numbers of *Cassia mirabilis*. Once distributed throughout the silica sands in northern Puerto Rico, it is now restricted to the southern shore of Tortuguero Lagoon and two sites in the Dorado area. One Dorado site has been proposed for the construction of a

large office building complex. Present use of this site for grazing does not appear to adversely affect the species. A second, small population in Derrado, recently discovered during a routine evaluation of a local highway project by the Puerto Rico Department of Natural Resources, will soon be transplanted to save it from complete destruction. The Tortuguero populations, the largest, are threatened by sand extraction, squatters, and the dumping of trash in this area.

B. Overutilization for commercial, recreational, scientific, or educational purposes. Taking for these purposes has not been a documented factor in the decline of this species.

C. Disease or predation. Disease and predation have not been documented as factors in the decline of this species.

D. The inadequacy of existing regulatory mechanisms. The Commonwealth of Puerto Rico has adopted a regulation that recognizes and provides protection for certain Commonwealth listed species. However, *Cassia mirabilis* is not yet on the Commonwealth list. Federal listing would provide immediate protection and, if the species is ultimately placed on the Commonwealth list, it would further enhance its protection and the possibilities for funding needed research.

E. Other natural or manmade factors affecting its continued existence. One of the most important factors affecting the continued survival of *Cassia mirabilis* is its limited distribution. Only 150 to 200 plants are known to occur in 3 areas. One population, unless transplanted successfully, is destined to be eliminated by road construction. Although the Tortuguero Lagoon area is designated by the Puerto Rico Department of Natural Resources as a Natural Reserve, the land remains in private ownership. Continued intensive land alteration could result in the extinction of the species.

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by this species in determining to make this rule final. Based on this evaluation, the preferred action is to list *Cassia mirabilis* as endangered. The species is restricted to only three locations on the siliceous sands of the north coast, all of which are subject to habitat destruction and modification. Therefore, endangered rather than threatened status seems an accurate assessment of the species' condition. The reasons for not proposing critical habitat for this species are discussed below in the "Critical Habitat" section.

Critical Habitat

Section 4(a)(3) of the Act requires that to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time a species is determined to be endangered or threatened. The Service finds that designation of critical habitat is not prudent for this species at this time. The number of individuals of *Cassia mirabilis* is sufficiently small that vandalism could seriously affect the survival of the species. Publication of critical habitat descriptions and maps in the Federal Register would increase the likelihood of such activities. The Service believes that Federal involvement in the areas where this plant occurs can be identified without the designation of critical habitat. Involved parties and landowners have been notified of the location and importance of protecting this species' habitat. Protection of this species' habitat will also be addressed through the recovery process and through the section 7 jeopardy standard.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, Commonwealth, and private agencies, groups, and individuals. The Endangered Species Act provides for possible land acquisition and cooperation with the Commonwealth, and requires that recovery actions be carried out for all listed species. Such actions are initiated by the Service following listing. The protection required of Federal agencies and the prohibitions against taking are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is being designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund or carry out are not likely to jeopardize the continued existence of a listed species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the

Service. No critical habitat is being proposed for *Cassia mirabilis*, as discussed above. Federal involvement is not expected where the species is known to occur.

The Act and its implementing regulations found at 50 CFR 17.61, 17.62, and 17.63 set forth a series of general trade prohibitions and exceptions that apply to all endangered plants. All trade prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR 17.61, would apply. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to import or export any endangered plant, transport it in interstate or foreign commerce in the course of a commercial activity, sell or offer it for sale in interstate or foreign commerce, or remove it from areas under Federal jurisdiction and reduce it to possession. In addition, for endangered plants, the 1986 amendments (Pub. L. 100-478) to the Act prohibit their malicious damage or destruction on Federal lands, and their removal, cutting, digging up, or damaging or destroying in knowing violation of any State law or regulation, including state criminal trespass law. The 1988 amendments do not reflect this protection for threatened plants. Certain exceptions can apply to agents of the Service and Commonwealth conservation agencies. The Act and 50 CFR 17.62 and 17.63 also provide for the issuance of permits to carry out otherwise prohibited activities involving endangered species under certain circumstances. It is anticipated that few trade permits for *Cassia mirabilis* will ever be sought or issued, since the species is not known to be in cultivation and is uncommon in the wild. Requests for copies of the regulations on plants and inquiries regarding them may be addressed to the Office of Management Authority, U.S. Fish and Wildlife Service, P.O. Box 3507, Arlington, Virginia 22233 (703/258-2104).

National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the Federal Register on October 25, 1983 (48 FR 49244).

References Cited

Agnew, L.S., and R.A. Delipps. 1979. Endangered and threatened plants of the

United States, Smithsonian Institution and World Wildlife Fund, Washington, DC xv + 403 pp.

Llogier, H.A., and L.F. Martorell. 1982. Flora of Puerto Rico and adjacent islands: a systematic synopsis. University of Puerto Rico, Rio Piedras, Puerto Rico. 342 pp.

Vivaldi, J.L., and R.O. Woodbury. 1981. Status report on *Chamaecrista glandulosa* var. *mirabilis* (Collard) Irwin & Barneby. Unpublished status report submitted to the U.S. Fish and Wildlife Service, Atlanta, Georgia. 36 pp.

Author

The primary author of this final rule is Ms. Susan Silander, Caribbean Field Office, U.S. Fish and Wildlife Service,

P.O. Box 491, Boquerón, Puerto Rico 00622 (809/851-7297).

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Fish, Marine mammals, Plants (agriculture).

Regulation Promulgation

Accordingly, part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations is amended, as set forth below:

PART 17—[AMENDED]

1. The authority citation for part 17 continues to read as follows:

Authority: 16 U.S.C. 1361–1407; 16 U.S.C. 1531–1543; 16 U.S.C. 4201–4245; Pub. L. 99–625, 100 Stat. 3500, unless otherwise noted.

2. Amend § 17.12(h) by adding the following, in alphabetical order under Caesalpiniaceae, to the List of Endangered and Threatened Plants:

§ 17.12 Endangered and threatened plants.

h. * * * * *

Species		Historic range	Status	When listed	Critical habitat	Special rules
Scientific name	Common name					
Caesalpiniaceae-Cassia family:						
<i>Cassia mirabilis</i>	(None)	U.S.A. (PR)		379	NA	NA

Dated: March 15, 1990

Richard M. ...

Acting Director, Fish and Wildlife Service.

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